

**REMARKS**

Claim 1 is amended to incorporate subject matter from claims 3 and 12. In view of the amendment to claim 1, claims 3 and 12 are canceled and claims 13 and 16 are amended to depend from claim 1. Claim 17 is amended to recite “oxygen-containing gases”. Claims 15 and 23 are canceled. No new matter is added. Upon entry of the Amendment, which is respectfully requested, claims 1, 2, 4-11, 13, 14, 16-22, 24 and 25 will be pending.

**Response to Claim Rejection under 35 U.S.C. § 112, second paragraph**

Claims 15 and 23 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. According to the Examiner, claims 15 and 23 lack a definition for defining enzyme activity.

Claims 15 and 23 are canceled. As such the § 112, second paragraph, rejection is rendered moot.

**Response to Claim Objections**

**Claim 17**

At page 5 of the Office Action, claim 17 is objected to because, according to the Examiner, the recitation “oxygen-containing gases air” should be “oxygen containing gases”.

In claim 17, “oxygen-containing gases air” is amended to recite “oxygen containing gases”. Accordingly, withdrawal of the objection to claim 17 is respectfully requested.

**Claims 5, 6, 8, 10 and 11**

At page 5 of the Office Action, claims 5, 6, 8, 10 and 11 are objected to under 37 C.F.R. § 1.75(c) as allegedly being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicants respectfully disagree. Claims 5, 6, 8, 10 and 11 properly limit the scope of the claims from which they depend from.

Claim 5 recites that the signalling agent is selected from security components, metallic properties or chemical security features, and machine-readable pigments, and thus, properly limits the scope of the presently claimed signaling agent.

Claim 6 recites that the signalling agents comprise thermochromes, photochromes, and electrically conductive substances comprising electrically conductive polymers, radioactive compounds, fluorescent compounds, luminescent compounds and various inorganic compounds, and thus, properly limits the scope of the compounds of the presently claimed signalling agent.

Claim 8 recites that the functional site comprises reactive groups selected from hydroxy, carboxy, anhydride, aldehyde, ketone, amino, amine, amide, imine, imidine and derivatives and salts thereof, and thus, properly limits the scope of the reactive groups of the functional sites of the presently claimed signalling agent.

Claim 10 recites that the modifying compound is a bifunctional compound containing at least one first functional site and at least one second functional group, the second functional group being selected from the group of hydroxyl (including phenolic hydroxy groups), carboxy, anhydride, aldehyde, ketone, amino, amine, amide, imine, imidine and derivatives and salts thereof, and thus, properly limits the second functional group of the presently claimed modifying compound.

Claim 11 recites that the modifying compound is a bifunctional compound containing at least one first functional site and at least one second functional group, the first functional site being selected from the group consisting of hydroxy, carboxy, anhydride, aldehyde, ketone,

amino, amine, amide, imine, imidine and salts thereof, and thus, properly limits the first functional group of the presently claimed modifying compound.

Accordingly, Applicants request reconsideration and withdrawal of the objection to claims 5, 6, 8, 10 and 11.

**Response to Claim Rejections based on Chandra**

At page 5 of the Office Action, claims 1, 3-14, 19, 20 and 24 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by *Chemo-Enzymatic Modification of High-Kappa Kraft Pulps with Laccase* by Chandra (Chandra). At page 8 of the Office Action, claims 15, 17, 18, 23 and 25 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Chandra.

Applicants traverse the rejection. Chandra does not disclose or suggest that the lignocellulosic fibrous matrix is reacted with an oxidizing agent in the presence of a chemical agent or a radiation agent as recited in amended claim 1. For at least this reason, claim 1 and the claims dependent thereon are not anticipated or rendered obvious.

Accordingly, withdrawal of the § 102(b) and § 103(a) rejections based on Chandra is respectfully requested.

**Response to Claim Rejections based on von Raven**

At page 6 of the Office Action, claims 1-25 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,482,514 (von Raven).

Applicants traverse and respectfully request the Examiner to reconsider in view of the following remarks.

The present invention relates to a process for producing a fibrous material, comprising a lignocellulosic matrix with phenolic groups which are capable of being oxidized by oxidizing agents and a signaling agent.

In the present invention according to amended claim 1, the lignocellulosic material is reacted with an oxidizing agent in the presence of a chemical agent or radiation agent capable of catalyzing the oxidation of phenolic or similar structural groups to provide an oxidized fiber material.

Von Raven discloses a photoactivator including fluorescein as a dye that has a photodynamic effect, specifically used as a catalyst to prevent a recurrence of yellowing through its retention by the paper making fibers. Von Raven discloses that it is expedient to combine the photoactivators with conventional bleaching processes, *e.g.*, using a peroxide bleach. However, the peroxide of von Raven does not act as the oxidizing agent of the present invention and the fluorescein of von Raven does not act as the signaling agent of the present invention.

Moreover, von Raven does not disclose or suggest a chemical agent or radiation agent capable of catalyzing the oxidation of phenolic or similar structural groups as recited in present claim 1.

Like present claim 1, in the present invention according to independent claim 2, the lignocellulosic fibrous matrix is reacted with an oxidizing agent in the presence of a substance capable of catalyzing the oxidation of phenolic or similar structural groups by said oxidizing agent. However, as discussed above, Von Raven does not disclose or suggest a substance capable of catalyzing the oxidation of phenolic or similar structural groups as recited in present claim 1.

For at least the reasons above, Applicants request reconsideration and withdrawal of the § 102(b) rejection of claims 1-25 based on von Raven.

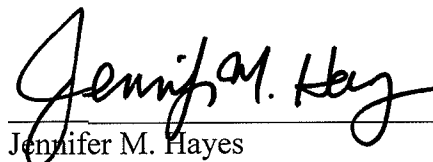
**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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